



Figure 21. (a) Composite of unmigrated seismic reflection images of the upper 600 m along profiles SCSI-2 through SCSI-14 of the SCSI-HR transect. Distance and depth are in meters and are without vertical exaggeration. The distance scale along the top refers to distance along each profile, and distance along the bottom refers to composite distance along the SCSI-HR transect. "Meter xxxx" (bottom of figure) refers to distance along the SCSI-LR transect. SP# refers to shot-point locations along SCSI-LR transect. Elevation along the SCSI-HR transect is shown in blue. Fold along each profile is shown below the elevation profile. Red arrowheads show the locations of mapped surface faults from figures 3 and 4 or coincident mapped and imaged faults. Yellow arrowheads show the locations of faults on the SCSI-HR reflection images but not mapped at the surface. Profiles SCSI-6 and SCSI-7 overlap in 2-D cross-sectional view (see fig. 2a). The seismic data have been bandpass filtered with minimum frequencies of 35 Hz (35-70-140-280 Hz). (b) Composite image from figure 21a with interpretative Quaternary sediments (yellow), faults (yellow lines), and wells (magenta) plotted in their approximate locations. Blue lines on the wells refer to the base of the Quaternary, as interpreted from the well logs (Stanley et al., 2002 and Hansen et al., 2004). The blue numbers above the figure are interpreted faults. (c) The red and white symbols are focal mechanisms (plan view) determined from shallow-depth (upper 10 km) earthquakes along the SCSI-HR transect and plotted in the approximate epicentral locations. Hypocentral depths are listed below the focal mechanisms. Note that the northwest-oriented fault planes are nearly vertical.